

## Page 1 of 1

All amounts are calculated in domestic currency.

---

129.0000
0.0000
0.0000
\$956.25
0.0000

Dock

Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

26  
No: PEC 55841  
Ship Date 21Jul17 at 11:33 From PFW  
Probill  
Via VIM DELIVERY  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Ship To: ( 1)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7  
Tel: 613-632-9577 Fax: 613-632-1053

B I L L O F L A D I N G

1) Our Order PEC- 73268- 1 Your PO # 37091  
STAINLESS STEEL ROUND BAR 303 STAINLESS  
.50" DIA X 144.0000"

DAS 5 Heat Number Tag No Quantity PCS Wt LBS  
0-89 442B 672224 72 FT 6 49

2) Our Order PEC- 73268- 2 Your PO # 37091  
STAINLESS STEEL ROUND BAR 303 STAINLESS  
.750" DIA X 144.0000"

DAS 5 Heat Number Tag No Quantity PCS Wt LBS  
0-89 423B 672225 36 FT 3 55

3) Our Order PEC- 73268- 3 Your PO # 37091  
ALUMINUM FLAT BAR 6061-T6511  
2.00" X 8.00" X 48.0000"

DAS 5 Heat Number Tag No Quantity PCS Wt LBS  
0-89 201709610 673055 8 FT 2 155

4) Our Order PEC- 73268- 4 Your PO # 37091  
ALUMINUM FLAT BAR 6061-T6511  
2.50" x 3.50" X 144.0000"

DAS 5 Heat Number Tag No Quantity PCS Wt LBS  
0-89 201709856 672226 12 FT 1 123

TOTAL: Tags 4 PCS 12 LBS 382

Heat Number  
201709610

\*\*\* Chemical Analysis \*\*\*

Page: 1 ....Continued

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.

Sort 7-26

## B I L L O F L A D I N G

Ship From:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

No: PEC 55841  
Ship Date 21Jul17 at 11:33 From PFW  
Probill  
Via VIM DELIVERY  
FOB CONCORD  
Frt PREPAID  
Route 0- 0 Manifest  
Vhcle Trailer  
Slp STAN IVERS (905-532-1350)  
Sold To: ( 20115)  
DART AEROSPACE

Ship To: ( 1)  
DART AEROSPACE

## B I L L O F L A D I N G

201709856  
423B  
442B

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*  
\*\* REFERENCED ON IT \*\*

TOTAL 1 BDL, 1 SKID GW. 408 LBS

\*CUSTOMER PICK-UP HRS AT THYSSENKRUPP MATERIALS NA  
CONCORD, ONT.\* \*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

\*\*\*\*\*

\*\*\*UNE SURCHARGE D'ENERGIE DE \$25.00

SERA AJOUTEE A CHAQUE COMMANDE.\*\*\*

\*\*\*POUR VOS BESOINS D'ACIER INOXYDABLE,

\*CONTACTEZ-NOUS. NOUS L'AVONS! TEL. 800-926-2600\*

*for 726*

Page: 2 .... Last

ALUMINIUM - ALUMINUM - CUIVRE - COPPER - PLASTIQUE - PLASTICS - ACIER INOX - STAINLESS  
ALUMINUM - BRASS - COPPER - PLASTICS - STAINLESS

TOUTES ERREURS ET/OU MARCHANDISES MANQUANTES DOIVENT ÊTRE  
RAPPORTÉES IMMÉDIATEMENT.

ERRORS OR SHORTAGE MUST BE REPORTED IMMEDIATELY

RETOUR DE MARCHANDISES AVEC NOTRE NUMERO D'APPROBATION SEULEMENT.  
MERCHANDISE MAY NOT BE RETURNED WITHOUT OUR APPROVAL NUMBER.





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37091**

Purchase Order Date 7/18/2017

PO Print Date 7/18/2017

Page Number 1 of 3

**Order From :**

VC-COP001

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

E-MAILED  
JUL 18 2017

**Contact Name**

**Vendor Phone** 905 669 9444

**Ship To Contact**

**Ship To Phone**

**Ship Via:** VENDOR'S TRUCK

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M303R0.500	303 Round Bar 0.500"	7/25/2017 Yes 7/25/2017		72.00 f	\$2.29	\$165.04

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

Line Total: \$165.04

2	M303R0.750	303 Round Bar 0.750	7/25/2017 Yes 7/25/2017		36.00 f	\$4.41	\$158.86
---	------------	---------------------	-------------------------------	--	------------	--------	----------

MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582

NOTE: AISI 304/316 NOT ACCEPTABLE

Line Total: \$158.86

SOFT-7-26.

PO Instructions: QUOTATION ST-72400

Note:

7/18/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO37091

Purchase Order Date 7/18/2017

PO Print Date 7/18/2017

Page Number 2 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone 905 669 9444

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

VENDOR'S TRUCK

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

3	M6061T6B2.000X08.000	6061-T6 BAR 2.00' X 8.00" ( CUT IN 4FT SECTION)	7/25/2017	8.00	\$69.50	\$556.00
		No	7/25/2017	f		

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR  
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR  
ASTM B221

4	M6061T6B2.500X03.500	6061-T6 Bar 2.50 x 3.50	7/25/2017	12.00	\$30.08	\$361.01
		Yes	7/25/2017	f		

MATERIAL: 6061-T6/T6510/T6511/T62 ALUMINUM BAR  
AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117/4128/4115/4116  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B211 OR  
ASTM B221

Line Total: \$556.00

Line Total: \$361.01

PO Instructions: QUOTATION ST-72400

Note:

7/18/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37091**

Purchase Order Date 7/18/2017

PO Print Date 7/18/2017

Page Number 3 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone 905 669 9444

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB FCA - (Free Carrier)

5	71401-45	PROCUREMENT QUALITY CLAUSES	7/25/2017	1.00	\$0.00	\$0.00
---	----------	--------------------------------	-----------	------	--------	--------

No

7/25/2017

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality document

*Signature*

Line Total:

\$0.00

PO Total:

\$1,240.91

PO Instructions: QUOTATION ST-72400

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr: 1

Change Date: 7/18/2017

Q U O T A T I O N

No: PEC ST-72400

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Quoted To: ( 20115)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Quoted Ship To: ( 1)  
 DART AEROSPACE  
 1270 ABERDEEN ST  
 HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS Qtd 14Jul17 Qte Ref  
 Frt PREPAID Via FOB  
 Tel 613-632-9577 Fax 613-632-1053 Ctc CHANTAL  
 Slp STAN IVERS (905-532-1350)

Q U O T A T I O N

QT No: PEC ST-72400

Test Certs: Chem-Y Phys-Y 1 Original copies with Shipment, 1 with Invoice

1 STAINLESS STEEL ROUND BAR 303 STAINLESS .50" DIA X 144.0000" MATERIAL ENERGY & CAP SURCHG	6 PCS 72 FT @ 2.2922 FT 25.0000 LOT	48 LBS 72 FT 165.04 25.00
2 STAINLESS STEEL ROUND BAR 303 STAINLESS .750" DIA X 144.0000" MATERIAL	3 PCS 36 FT @ 4.4128 FT	54 LBS 36 FT 158.86
3 STAINLESS STEEL ROUND BAR 304L .375" DIA X 144.0000" MATERIAL	2 PCS 24 FT @ 2.2917 FT	9 LBS 24 FT 55.00
4 STAINLESS STEEL SHEET 304L-2B DUAL GRADE .1050 Nom X 48.0000" X 96.0000" MATERIAL SKID	1 PCS 1 PCS @ 300.8700 EA 25.0000 LOT	140 LBS 300.87 25.00
5 STAINLESS STEEL SHEET 304L-2B DUAL GRADE .0600 Nom X 48.0000" X 96.0000" MATERIAL	2 PCS 2 PCS @ 171.9300 EA	160 LBS 343.86
6 ALUMINUM FLAT BAR 6061-T6511 2.00" x 5.00" X 5.6250" Part No *** OFFERING	20 PCS	115 LBS
<<<----- SPECIFICATIONS ----->>>		
Ga Tol + 0.0000 - 0.0000 Pcs/Tag	20	
WthTol + 0.0000 - 0.0000 Wt/Skd		
LthTol + 0.0630 - 0.0000 Ty	Pk	
MATERIAL	20 PCS @ 18.6875 EA	373.75
7 ALUMINUM FLAT BAR 6061-T6511 2.00" X 8.00" X 48.0000"	2 PCS	155 LBS 8 FT

## Q U O T A T I O N

No: PEC ST-72400

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Quoted To: ( 20115)  
 DART AEROSPACE

Quoted Ship To: ( 1)  
 DART AEROSPACE

Q U O T A T I O N				QT No: PEC ST-72400	
SPECIFICATIONS				>>>	
Ga Tol +	0.0000	-	0.0000 Pc/Tag	2	
WthTol +	0.0000	-	0.0000 Wt/Skd		
LthTol +	0.1250	-	0.0000 Ty	Pk	
MATERIAL			8 FT @	69.5000 FT	556.00
8 ALUMINUM FLAT BAR 6061-T6511				1 PCS	53 LBS
1.50" x 2.50" X 144.0000"				12 FT @	12 FT
MATERIAL				15.2400 FT	182.88
9 ALUMINUM FLAT BAR 6061-T6511				1 PCS	123 LBS
2.50" x 3.50" X 144.0000"				12 FT @	12 FT
MATERIAL				30.0842 FT	361.01
10 ALUMINUM FLAT BAR 6061-T6511				2 PCS	173 LBS
1.00" x 6.00" X 144.0000"				24 FT @	24 FT
MATERIAL				21.1567 FT	507.76
11 ALUMINUM SHEET 6061 T6				2 PCS	86 LBS
.0640 Nom X 48.0000" X 144.0000"				86 LBS @	3.2522 LBS
MATERIAL				25.0000 LOT	279.69
SKID					25.00
12 ALUMINUM SHEET 6061 T6				2 PCS	109 LBS
.0810 Nom X 48.0000" X 144.0000"				109 LBS @	3.2522 LBS
MATERIAL					354.49

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
 WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
 TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

Price in effect at time of shipment.

Price based on receipt of total order.

All weights are theoretical.

All orders are subject to credit approval.

\*\*\*\* TEL. 800-926-2600 \*\*\*\*

\*\*\* CUSTOMER PICK-UP HOURS \*\*\*

\*\*\* 9:00 AM TO 4:00 PM \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE



Q U O T A T I O N

No: PEC ST-72400

Quoted By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Quoted To: ( 20115)  
 DART AEROSPACE

Quoted Ship To: ( 1)  
 DART AEROSPACE

=====

Q U O T A T I O N

QT No: PEC ST-72400

ADDED TO EVERY ORDER.\*\*\*

\*\*\*\*\*

\*FOR OUR FULL SALES TERMS AND CONDITIONS, PLEASE

\*VISIT OUR WEBSITE: [www.copperandbrass.com](http://www.copperandbrass.com)

\*\*\*\*\*

NO CANCELLATIONS ON PROCESSED MATERIAL.

\*\*\*\*\*

Order Totals: 12 Items 1225 LBS

\*\*\*\*\*

Material	Processing	Freight	Other	Taxes	ORDER AMT
3,639.21			75.00	482.84	4,197.05

\*\*\*\*\*

Taxes: ONHSTS	482.84	0.00	0.00	0.00
---------------	--------	------	------	------

18Jul17 13:18      S A L E S   A C K N O W L E D G M E N T      No: PEC ST-73268

Sold By:  
THYSSENKRUPP MATERIALS NA  
2821 LANGSTAFF ROAD  
CONCORD, ONTARIO L4K 5C6  
Tel: 905 669 9444 Fax: 905-738-9033

Sold To:    ( 20115)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Ship To:    ( 1)  
DART AEROSPACE  
1270 ABERDEEN ST  
HAWKESBURY, ON K6A 1K7

Trm NET 30 DAYS/NET 30 JOURS      Ord 18Jul17 Due20Jul17  
Frnt PREPAID      Via VIM DELIVERY      FOB CONCORD  
Con 96294      PO/Rel 37091  
Slp STAN IVERS (905-532-1350)      Tel 613-632-9577 Fax 613-632-1053

=====

S A L E S   A C K N O W L E D G M E N T      SO No PEC ST-73268  
Test Certs: Chem Y Phys Y   1 Original copies with Shipment, 1 with Invoice

-----

1 STAINLESS STEEL ROUND BAR 303 STAINLESS	6 PCS	48 LBS
.50" DIA X 144.0000"		72 FT
MATERIAL	72 FT @ 2.2922 FT	165.04
ENERGY & CAP SURCHG	25.0000 LOT	25.00

-----

2 STAINLESS STEEL ROUND BAR 303 STAINLESS	3 PCS	54 LBS
.750" DIA X 144.0000"		36 FT
MATERIAL	36 FT @ 4.4128 FT	158.86

-----

3 ALUMINUM FLAT BAR 6061-T6511	2 PCS	155 LBS
2.00" X 8.00" X 48.0000"		8 FT

-----

<<<----- SPECIFICATIONS ----->>>

Ga Tol + 0.0000 - 0.0000 Pc/Tag	2
WthTol + 0.0000 - 0.0000 Wt/Skd	
LthTol + 0.1250 - 0.0000 Ty	Pk
MATERIAL	8 FT @ 69.5000 FT
	556.00

-----

4 ALUMINUM FLAT BAR 6061-T6511	1 PCS	123 LBS
2.50" x 3.50" X 144.0000"		12 FT
MATERIAL	12 FT @ 30.0842 FT	361.01

-----

MILL TEST REPORTS, PACKING SLIPS ARE TO SENT  
WITH MATERIAL AND FAXED TO THE CUSTOMER PRIOR  
TO SHIPPING.

ATTN: CHANTAL/LINDA

\*\* ALL PACKING SLIPS MUST HAVE THE HEAT NUMBER \*\*

\*\* REFERENCED ON IT \*\*

\*\* CUSTOMER PICK-UP HRS / 9:00 AM TO 4:00 PM \*\*

\*\*\* TEL. 800-926-2600 \*\*\*

\*\*\*\*\*

\* WE STOCK STAINLESS STEEL!!!! \*

\* PLEASE LET US QUOTE YOUR NEXT REQUIREMENT \*

\*\*\*\*\*

\*\*\*PLEASE NOTE A \$25.00 ENERGY SURCHARGE WILL BE  
ADDED TO EVERY ORDER.\*\*\*

\*\*\*\*\*

Sold By:  
 THYSSENKRUPP MATERIALS NA  
 2821 LANGSTAFF ROAD  
 CONCORD, ONTARIO L4K 5C6  
 Tel: 905 669 9444 Fax: 905-738-9033

Ship To: ( 1 )  
DART AEROSPACE

S A L E S   A C K N O W L E D G M E N T      SO No PEC ST-73268  
Test Certs: Chem Y Phys Y   1 Original copies with Shipment, 1 with Invoice  
\*FOR OUR FULL SALES TERMS AND CONDITIONS, PLEASE  
\*VISIT OUR WEBSITE: [www.copperandbrass.com](http://www.copperandbrass.com)  
\*\*\*\*\*  
NO CANCELLATIONS ON PROCESSED MATERIAL.  
\*\*\*\*\*

Order Totals:        4 Items        380 LBS

\*\*\*\*\*

Material	Processing	Freight	Other	Taxes	ORDER AMT
1,240.91			25.00	164.57	1,430.48

\*\*\*\*\*

Taxes: ONHSTS 164.57



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO37097**

Purchase Order Date 7/18/2017 1:39:31 PM

PO Print Date 7/18/2017

Page Number 1 of 1

Order From :  
CHEMETALL CANADA LIMITED  
P.O. BOX 46186  
POSTAL STATION A  
TORONTO, ON M5W 4K9  
CA

VC-CHE001

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 877-311-1471  
  
Ship To Contact  
Ship To Phone  
Ship Via: Purolator ground collect  
Ship Acct:

Buyer Chantal Lavoie  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
2	71400-40	OKT-2205-H GORDOTEST INDICATOR 155	7/31/2017  Yes 7/31/2017		3.00  Each	\$20.23	\$60.69
Line Total:							\$60.69
3	71400-40	SERVICE FEE	7/31/2017 Yes 7/31/2017		1.00 Each	\$50.00	\$50.00
Line Total:							\$50.00
PO Total:							\$110.69

PO Instructions: PROCUREMENT QUALITY CLAUSES  
A000 QUALITY CLAUSES NOT REQUIRED

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr: 1

Change Date: 7/18/2017



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

## METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 307469 11 Mail To:  
THYSSENKRUPP MATERIALS  
2821 LANGSTAFF ROAD  
CONCORD, ON L4K5C6

Ship To:  
THYSSENKRUPP MATERIALS  
2821 LANGSTAFF ROAD  
CONCORD, ON L4K5C6

Date: 6/28/2017 Page: 1

Steel: 303

Finish: CD

Corrosion:

NAS Order: PN 0080284 03

Your Order: PEC283109

### PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw  
UNS 30300, ASTM A582/12 EN 10204 3.1, ASTM A484/15  
AMS 5640V TYPE 1, QQS-764B CONDITION A  
SOLUTION ANNEAL TEMP 1900F MIN, ASTM F899/12b

### REMARKS:

COMPLIES W/REQUIREMENTS OF DPAR 252.225-7009 EU DIRECTIVE  
2011/65/EU, ROHS, EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BI8219 1		.5000		1,541	144.00		5	1

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323  
Chemical Analysis per ASTM A751/14a

NAS Heat	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
442B 5 9.89	US	.041	.16	17.21	.31	1.84	.32	.036	8.51	.030
S % SI %										
.3060 .44										

### MECHANICAL PROPERTIES

Product Id	d	HB	.2YS	UTS	RA	Elong
BI8219 1	R L	199.0	80.63	102.62	46.20	40.47

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.





North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

## METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 310563 8 Mail To:

THYSSENKRUPP MATERIALS  
2821 LANGSTAFF ROAD  
CONCORD, ON L4K5C6

Ship To:

THYSSENKRUPP MATERIALS  
2821 LANGSTAFF ROAD  
CONCORD, ON L4K5C6

Date: 7/11/2017 Page: 1

Steel: 303

Finish: CP

Corrosion:

Your Order: PEC284727 NAS Order: IN 0249486 02

### PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw  
UNS 30300, ASTM A582/13 EN 10204 3.1, ASTM A484/15  
AMS 5640V TYPE 1, QQS-764B CONDITION A  
SOLUTION ANNEAL TEMP 1900F MIN, ASTM F899/12b

### REMARKS:

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7009 EU DIRECTIVE  
2011/65/EU, ROHS, EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BI8064 7		.7500		1,069	144.00	6	1	

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323  
Chemical Analysis per ASTM A751/14a

Heat	CM	C	%	CO	%	CR	%	CU	%	MN	%	MO	%	N	%	NI	%	P	%
423B	US		.025	.13		17.19		.32		1.88		.34		.048		8.54		.032	
		S	%	SI	%														
			.3120	.43															

### MECHANICAL PROPERTIES

Product Id	Id	HB	.2YS	KSI	UTS	KSI	RA	%	Elong	% 4D
BI8064 7	R L	201.0	71.62		97.63		57.54		34.97	

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

# THYSSENKRUPP MATERIALS NA

## DART AEROSPACE

ALUMINUM FLAT BAR 6061-T6511  
2.50" x 3.50" X 144.0000"  
PART NO.

PO/Rel 37091

We certify that this is a true copy of the report furnished by the producer of the metal, or data resulting from tests made in approved labs.

Certificate of Mill Test Results  
Signed by: \_\_\_\_\_  
BL PEC-055841-004  
20Jul17  
Pg 1/1



Can Do.

### Service Center Metals

5850 Quality Way  
Prince George, VA 23875

## CERTIFIED INSPECTION REPORT AND TEST RESULTS FOR EXTRUDED PRODUCTS



BILL TO

ThyssenKrupp Materials NA-Concord, ON

SHIP TO

ThyssenKrupp Materials NA-Concord, ON

Quantity Certified 2,116 lbs 17 pcs

MANIFEST NUMBER

336418

CUSTOMER PO

PEC-283848

CUSTOMER PART NUMBER

MRB0440

DIE NUMBER

MRB0440

ALLOY/TEMPER

6061-T6511

DESCRIPTION

MQRB 2.500x3.500

DATE OF SHIPMENT

6/22/2017

SALESPERSON

D. Schroeder (Canada)

OUR ORDER NUMBER	ITEM
922654	3

CERTIFICATION

ASTM-B221-14 StencilCont

SPECIFICATION

AMS-QQA-200/8 Rev-A

We hereby certify that the material covered by this report has been inspected in accordance with the most recent certification revision, and has been found to meet the applicable requirements described herein, including any specifications forming a part of the description, and that samples representative of the material met the composition limits and had the mechanical properties shown. This product is RoHS-2, REACH, and DFARS compliant.

### Mechanical Properties

Tests Lot No.

2 201709856

DAS  
5  
9-89

Test Date

6/22/17

Ultimate Tensile  
Strength (KSI)

min 48.70  
max 50.10

Yield Strength  
(KSI)

min 43.90  
max 45.90

Percent  
Elongation

min 17.00  
max 17.90

### Chemical Composition for Aluminum Alloy 6061

Cast #	Lot No.	Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al	Others		Melt Source:
												Each	Total	
001E170504A	201709856	6061	0.74	0.37	0.33	0.10	0.90	0.10	0.06	0.03	97.37	0.05	0.15	United States of America
001E170531B	201709856	6061	0.73	0.36	0.31	0.09	0.87	0.09	0.04	0.02	97.49	0.05	0.15	United States of America
001J170504A	201709856	6061	0.74	0.37	0.33	0.10	0.90	0.10	0.06	0.03	97.37	0.05	0.15	United States of America

SCM is ISO 9001-2015 certified

SCM products are melted and extruded in the USA

*Calvin J. Williams*

Calvin J. Williams, Director of Quality & Technical Services

Print Date: 6/22/2017

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303R0.500  
 DATE: JUL 26 2017

PO / BATCH NO.: 037091/M138147

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 72'  
 QUANTITY INSPECTED: 72'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .500"  
 THICKNESS RECEIVED: .500"  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<u>45m 1A582</u>
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<u>44# 442B</u>
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<u>303R</u>
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	<u>303R</u>
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>5</u> <u>0.89</u> DATE: <u>JUL 26 2017</u>	SIGNED OFF BY: _____ DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303 SS ROUND BAR  
(NOTE: AISI 304/316 NOT ACCEPTABLE)

SPECIFICATION: **DAS 5**  
PART NUMBER: **ASTM A582**  
**M303R(D,DDD)**  
**DIA.**

WHERE "D,DDD" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M303R0.750

RELEASED  
R 2010-02-02  
NP

B	REFORMAT DWG. ADD SPECS (ZN D8-1).	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.01.05		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	REV. B
M303R	SHEET 1 OF 1
TITLE	SCALE
303 ROUND BAR	NTS

COPYRIGHT © 2001 BY DART AEROSPACE LTD.  
THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS  
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM WITHOUT  
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303 R0.750  
 DATE: JUL 26 2017

PO / BATCH NO.: 0037091/M138147

MATERIAL CERT REC'D: YES  
 QUANTITY RECEIVED: 36'  
 QUANTITY INSPECTED: 36'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .750  
 THICKNESS RECEIVED: .747  
 SHEET SIZE ORDERED:   
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/> N	
CORROSION	Y <input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> N	Astm A582
CORRECT THICKNESS	<input checked="" type="checkbox"/> N	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> N	HT# 423B
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> N	M303R
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> N	303R
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <u>5</u> DATE: <u>JUL 26 2017</u>	SIGNED OFF BY: _____ DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 303 SS ROUND BAR  
(NOTE: AISI 304/316 NOT ACCEPTABLE)

SPECIFICATION:

PART NUMBER:

ASTM A582  
M303R0.000  
DIA.  
5  
0-89

WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M303R0.750

RELEASED  
R 2010-02-02  
NRP

B	REFORMAT DWG. ADD SPECS (ZN D8-1).	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.01.05		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	M303R
TITLE	303 ROUND BAR
REV. B	SHEET 1 OF 1
SCALE	NTS
COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED ONLY FOR THE PURPOSES FOR WHICH IT WAS PREPARED AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M6G176B2.000 X81000

PO / BATCH NO.: 037091/M138147

DATE: JUL 26 2017

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: 2"x8"

QUANTITY RECEIVED: 8'

THICKNESS RECEIVED: 2"x8"

QUANTITY INSPECTED: 8'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	N	
CORROSION	Y	<input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	N	Astm B221
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	N	H+H 201709610
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	N	606176B
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	N	606176511
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

*testers located in the Quality Office*

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u>	<u>5</u>	SIGNED OFF BY: _____
DATE: <u>JUL 26 2017</u>	<u>9-89</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B21 OR ASTM B221

B

PART NUMBER: M6061T6B | T.TTT | X | WWW.WWW | 5 | 3-89

WHERE "T.TTT" = THICKNESS IN INCHES  
"WWW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

RELEASED  
2009-09-03  
MAD

B	REMOVE QQ-A-250/11 OPTION, REFORMAT NOTES, ADD ASTM B21/B221 (ZN D7-1)	CP	09.07.13
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	AS		
CHECKED	AS		
MFG. APPR.	M6061T6B		
APPROVED	TITLE		
DE APPR.	6061-T6 BAR		
DATE	09.07.13		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. B SHEET 1 OF 1 SCALE NTS	
COPYRIGHT © 2001 BY DART AEROSPACE LTD. THIS DOCUMENT IS UNCLASSIFIED AND IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.			

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 6061T6 B2.500X3.600

PO / BATCH NO.: P037091/M138147

DATE: JUL 26 2017

MATERIAL CERT REC'D: yes

THICKNESS ORDERED: 2.5"X3.5"

QUANTITY RECEIVED: 12'

THICKNESS RECEIVED: 2.5"X3.5"

QUANTITY INSPECTED: 12'

SHEET SIZE ORDERED: N/A

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	ASTM B221
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	HT # 201709856
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	6061T6B
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	606176511
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <div style="text-align: center;"><b>5</b></div>	SIGNED OFF BY: _____	
DATE: <u>JUL 26 2017</u>	DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR

SPECIFICATION: QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221

B

DAS

5

PART NUMBER: M6061T6B | T.TTT | X | WWW.WWW | THICK | WIDTH | 9-89

WHERE "T.TTT" = THICKNESS IN INCHES  
"WWW.WWW" = WIDTH IN INCHES

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000

RELEASED  
N 2009-03-03  
MAD

B	REMOVE QQ-A-250/11 OPTION, REFORMAT NOTES, ADD ASTM B211/B221 (Z N D7-1)	CP	09.07.13
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN			
CHECKED	AS		
MFG. APPR.	M6061T6B		
APPROVED	TITLE		
DE APPR.	6061-T6 BAR		
DATE	09.07.13		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. B SHEET 1 OF 1 SCALE NTS	
COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR ANY REASON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			